

## How To Add Batch Verification To WM Mobil Screen With Enter Definition



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Active Contributor

2022 Aug 30 3:23 PM



7 Kudos

2,397 Views

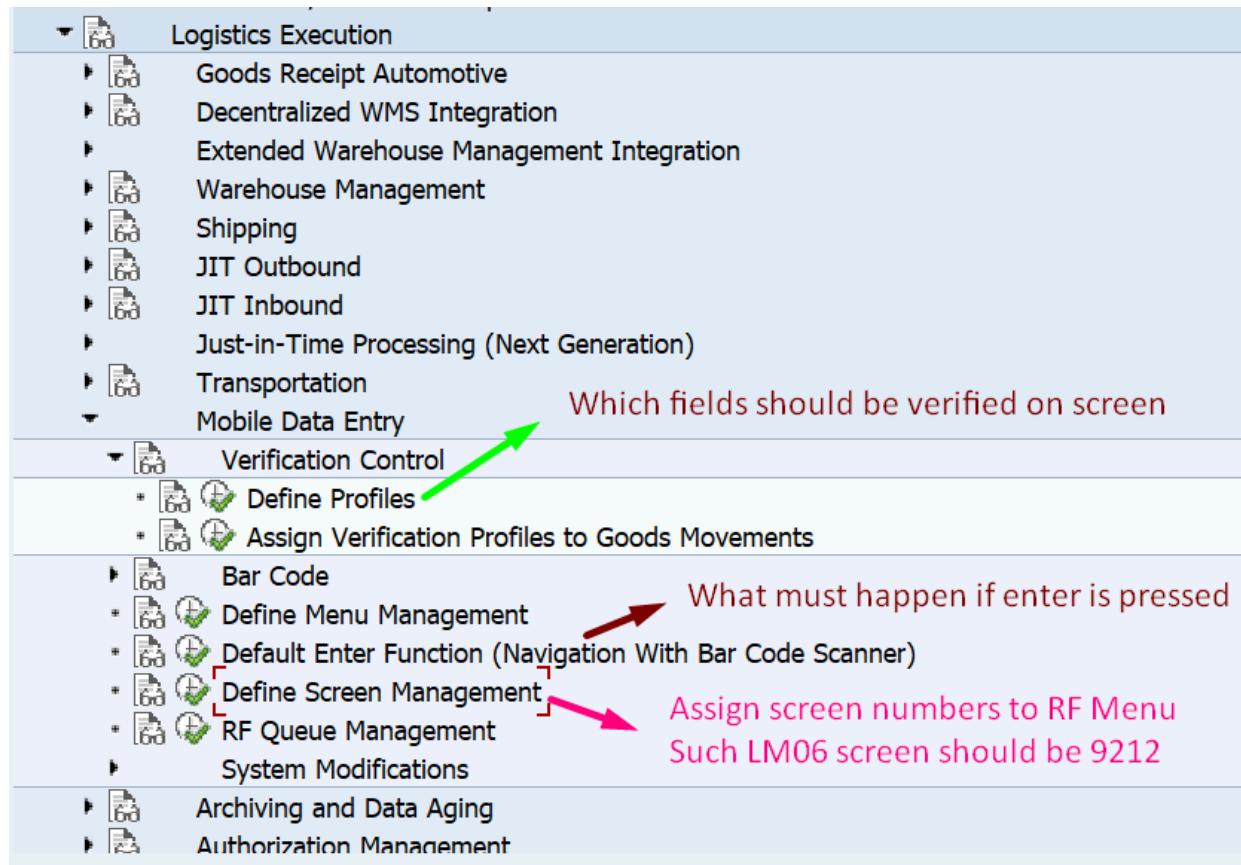
Hi,

I don't know why but batch verification does not exists on WM mobile screens. I have checked Google and noticed many people are asking same question. Therefore I decided to share my solution with you.

If you worked with WM, you would know, WM provides RF Screens to be used by mobile devices with tcodes starts with LMXX. Those screens can be enhanced and new screen can be assigned to those transaction codes with a variant. And in LRFMD you can choose that variant if you want to work with enhanced screen.

Replacing screens and adding new fields are easy. For that I have followed Rakshith Gore's [blog post](#). That part is easy. It becomes complex once you need to integrate Verification customization to that new screen. And on top of that, if you need to implement Enter Functionality customization, then you may spend sometime debugging existing screens.

Please check screen shot below to see [customizing settings](#) for Verification and Enter Behavior.



## Verification Profile Settings

Change View " <u>Definition of Verification Profile</u> ": Overview of Selected								
Verification profiles								
WhN	Profile	Source bin	Dest.bin	SU src. bin	SU Dest. bin	Qty src. bin	Qty dest. bin	Mat.src.
TST	INTMOV	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
TST	PCKEAC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1
TST	PICK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
TST	PUTWY	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1

**Change View "Verification Profile Search": Overview**

New Entries

Verification Profile Search

Wa...	So...	De...	Mo...	Profile	Ski...	Au...
TST	****	916	0	PICK	<input checked="" type="checkbox"/>	<input type="checkbox"/>
TST	902	***	0	PUTWY	<input checked="" type="checkbox"/>	<input type="checkbox"/>
TST	902	***	501	PUTWY	<input type="checkbox"/>	<input type="checkbox"/>

## Enter Function Settings

Remember that part after copying screen 1212 to 9212. Here you need to write 1212 not 9212!

Note: 1212 and 9212 screens are explained below.

**Change View "Control for Enter on RF Screens: Categorization": Overview**

New Entries

Not the screen 9212 but original screen 1212

Control for Enter on RF Screens: Categorization

W...	Program	Act.s...	ScreenCat.
TST	SAPLLMOB	1212	SOURCE

**Change View "Control for Enter on RF Screens: Function Code Sequence"**

Whse no.	ScreenCat.	La...	Lst...	Push1	Push2	Push3
TST	SOURCE		<input checked="" type="checkbox"/>	<input type="checkbox"/>	SAVE1	
TST	SOURCE		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	CMPL	

**Function code that should be executed on an RF screen**

This field is used to control screen navigation in RF transactions.

You can set up the ENTER key in such a way that it replaces a sequence of up to three function keys. After you do this, you no longer need to choose the pushbuttons on the screen.

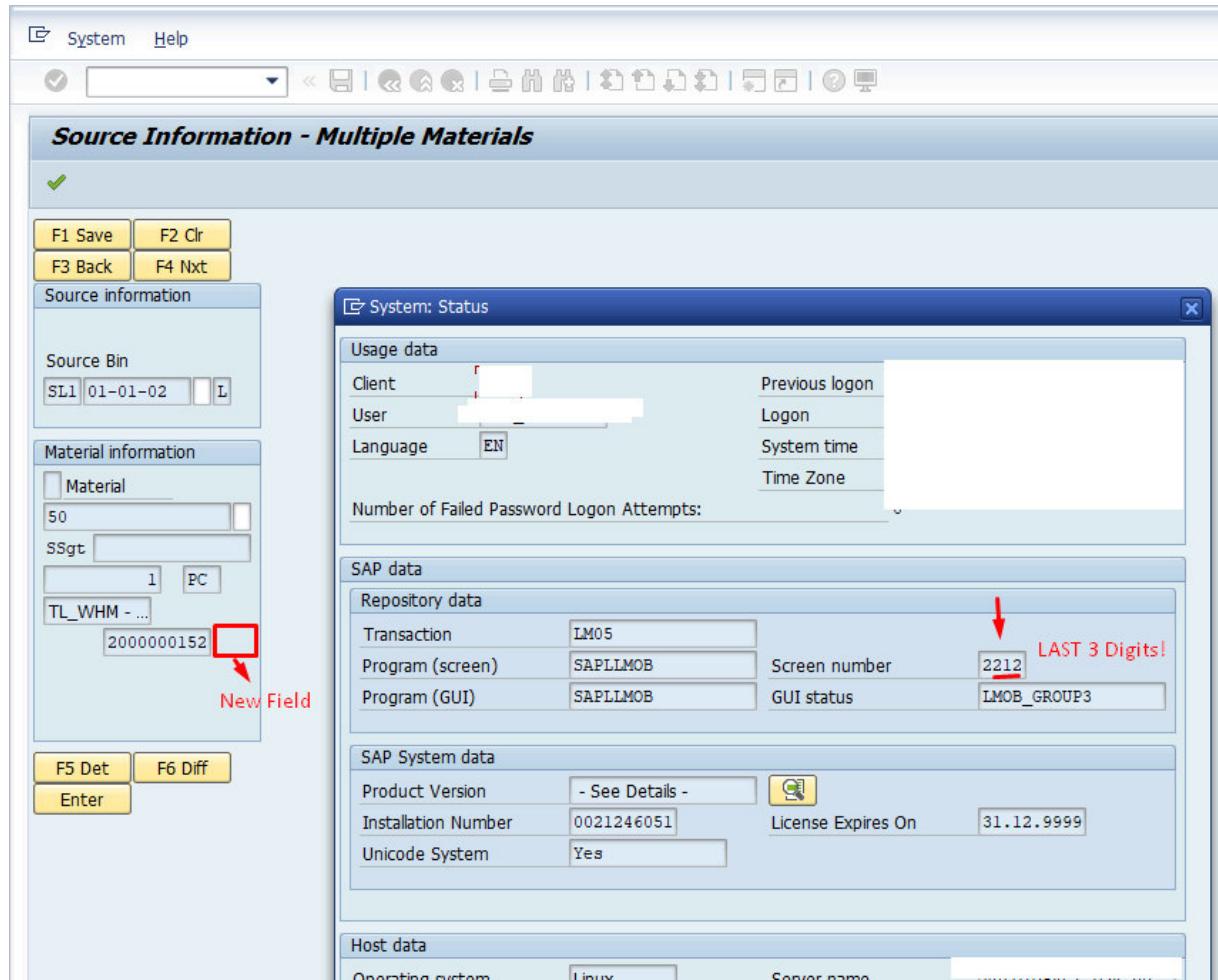
When you define the ENTER key, use the actual function code of the screen pushbutton:

PGDN Page down  
 SAVE Save  
 CMPL Save and display next screen

## Enhancement bit...

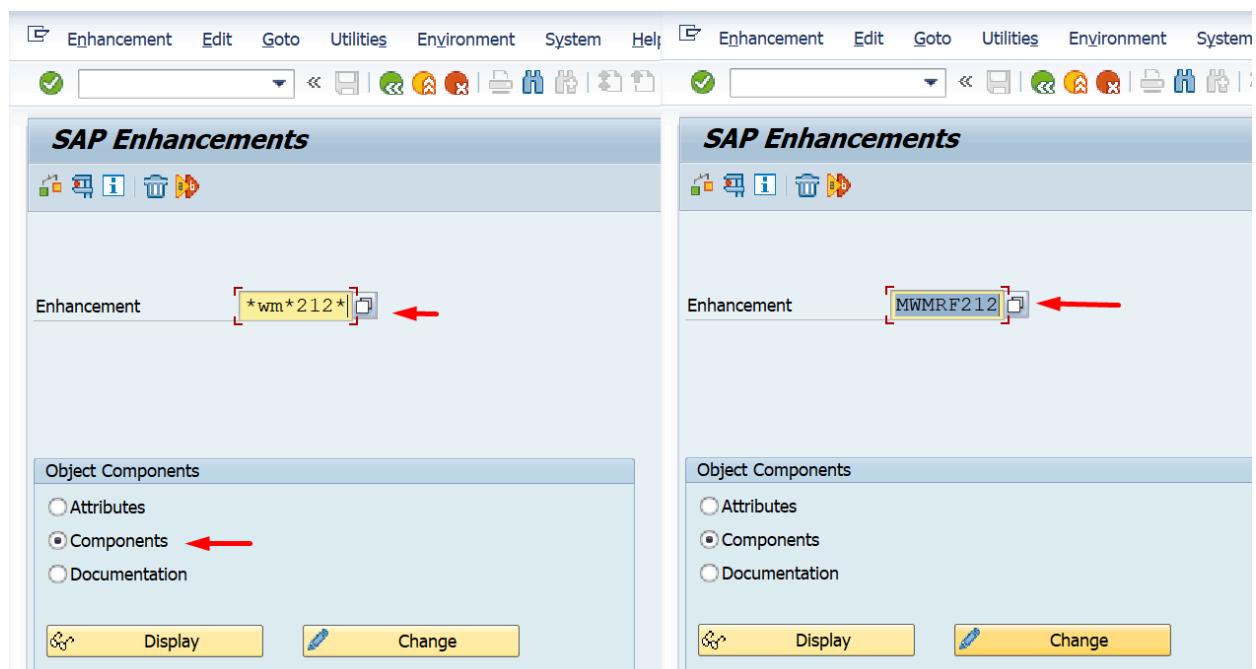
So far we have seen customization settings and below, I will show you how to add batch verification to LM06 screen.

First we need to find the screen and enhancement for it. To do that, we just need to open status screen on LM06 screen that we want to change.



Our screen number is 2212. Last 3 digit is important, \*212 will help us to find user exit.

To find user exit, run tcode SMOD and select components, enter \*wm\*212\* and pres f4 to search.



We found our user-exit. Now click display and pay attention to program name.

The screenshot shows the SAP Enhancement MWMRF212 interface. The top menu bar includes Enhancement, Edit, Goto, Environment, System, and Help. Below the menu is a toolbar with various icons. The main area has a title bar 'Components in SAP Enhancement MWMRF212' and several tabs: Function Exits, Function codes, and Dynpro Areas.

**Function Exits:**

Function module	Short Text
EXIT_SAPLLMOB_170	USER EXIT - DATA TO CUSTOMER SCREEN (DUMMY 1212)
EXIT_SAPLLMOB_480	USER EXIT - DATA FROM CUSTOMER SCREEN (DUMMY 1212)

**Dynpro Areas:**

Calling Dynpro	No.	Area	Called screen	No.	Short Text
SAPLLMOB	1212	EXIT0101	SAPLXLRF	0000	

Cells in the 'Calling Dynpro' and 'Called screen' columns are highlighted with green and red boxes respectively.

To create an alternative screen we need to copy screen **1212** from **SAPLLMOB** to **SAPLXLRF** with screen number **9212**. Below you can see attributes and code of 9212.

Batch field is assigned to LTAP-CHARG, which is WM transfer order's batch.

GS\_9212-CHARG is the verification field. GS\_9212 is a structure which is defined in ZXLRFTOP.

ZXLRFTOP is an include file of XLRF function group's master program LXLRFTOP.

Code of ZXLRFTOP:

```
*&-----  
*& Include          ZXLRFTOP  
*&-----
```

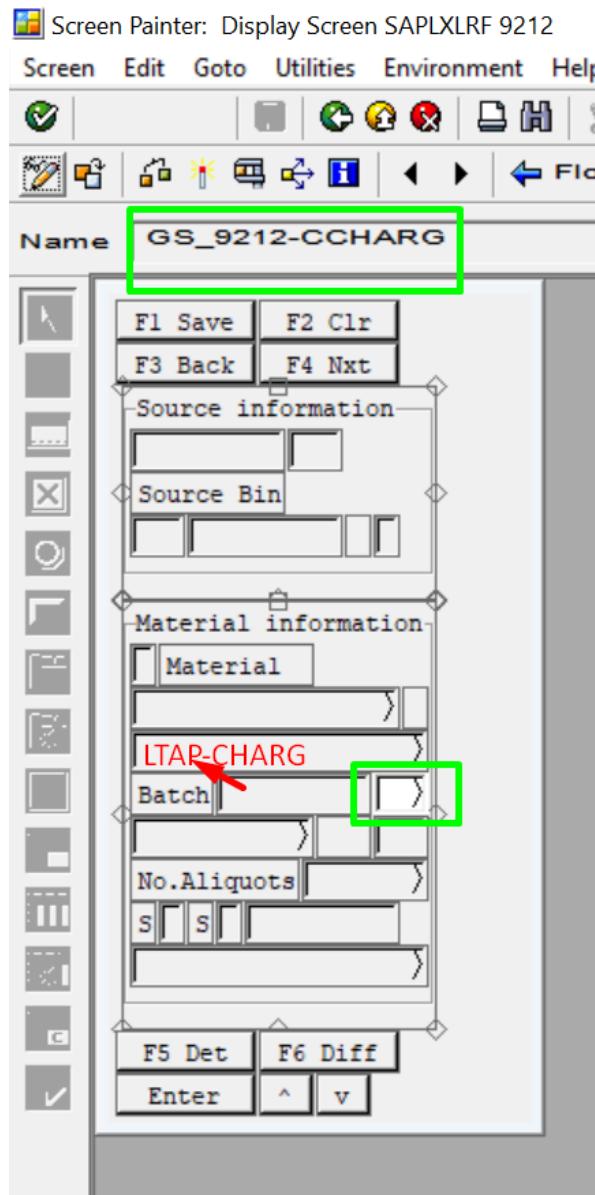
```
INCLUDE llmobdat.  
INCLUDE zzxlrf_9212.  
  
DATA: gs_9212 TYPE ZWM_S_SCR_9212.
```

And attributes of structure ZWM\_S\_SCR\_9212

**Dictionary: Display Structure**

The screenshot shows the SAP Dictionary: Display Structure interface. The structure is named ZWM\_S\_SCR\_9212, which is described as SAPLXLRF 9212 Screen Fields. The 'Attributes' tab is selected. There are five attributes listed:

Component	Typing Method	Component Type	Data Type	Length	Decim...	Coordinate	Short Description
CCHARG	Types	▼ CHARG_D	CHAR	10	0		0 Batch Number
NUM OF ALQ	Types	▼ CHAR20	CHAR	20	0		0 Char 20
CANVERIFY	Types	▼ XFELD	CHAR	1	0		0 Checkbox
MUSTVERIFY	Types	▼ XFELD	CHAR	1	0		0 Checkbox
TAPOS	Types	▼ TAPOS	NUMC	4	0		0 Transfer order item



**Screen Painter: Display Screen for SAPLXLRF**

Repository Browser      Screen number: 9212 Active

Function Group: XLRF

Object Name: XLRF

Description: Exit Group for Fms Around Screen Exits

Attributes    Element list    Flow logic

```

1  PROCESS BEFORE OUTPUT.
2  MODULE STATUS_SCREEN_GROUP3.
3  MODULE TAP_DISPLAY.
4  MODULE SPECIAL_FIELD_OUTPUT.
5  MODULE SET_VALUES.
6  MODULE SET_CURSOR.
7
8
9
10
11
12  PROCESS AFTER INPUT.
    MODULE EXIT_COMMANDS AT EXIT-COMMAND.
    MODULE MODIFY_TAP.
    "FIELD OK_CODE MODULE USER_COMMANDS.
    MODULE USER_COMMANDS.
  
```

Screen number		9212	Active													
		Attributes	Element list	Flow logic												
		General	Texts/I/O Templates	Special	Display	Mod. Groups/Functions	References									
H...	M	Name	Type ...	Line	Col...	De...	Vis...	Hei...	Scr...	Format	In...	Ou...	Out...	Dic...	Dict....	P...
		RLMOB-PENTER	Push	19	1	9	9	1			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3	E...
		RLMOB-PPGUP	Push	19	11	3	3	1			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1	E...
		RLMOB-PPGDN	Push	19	15	3	3	1			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1	E...
			OK	0	0	20	20	1	<input type="checkbox"/>	OK				<input type="checkbox"/>		
empty OK_CODE																

Screen number		9212	Active	
		Attributes	Element list	Flow logic
Short Description	Source Information - Multiple Materials			
Original Language	EN	English	Package	
Last Changed	26.08.2022	11:13:21		
Last Generation	26.08.2022	11:13:25		
Dynpro Type				Settings
<input type="radio"/> Normal <input checked="" type="radio"/> Subscreen <span style="color:red">←</span> <input type="radio"/> Modal dialog box <input type="radio"/> Selection Dynpro				<input checked="" type="checkbox"/> Switch Off R <input type="checkbox"/> Template (N <input type="checkbox"/> Hold Scroll F <input type="checkbox"/> Without App <input type="checkbox"/> Fiori: Zoom-
Other Attributes				
Next Dynpro	9212			
Cursor Position	LTAP-VLPLA			
Screen Group				
Rows/Columns	Occupied	19	22	

And the screen's code... Placed in include ZZXLRF\_9212 of Function Group XLRF

```

*&-----
*& Include           ZZXLRF_9212
*&-----


*&-----
*& Module STATUS_SCREEN_GROUP3 OUTPUT
*&-----
*&
*&-----
MODULE status_screen_group3 OUTPUT.

ENDMODULE.

*&-----
*& Module TAP_DISPLAY OUTPUT
*&-----
*&
*&-----
MODULE tap_display OUTPUT.

"Standard verification requires call of line below in sub screen.
PERFORM tap_display(sapllmob).

"Below lines are required for integration of batch verification
"and for enter behaviour.
"Standard enter behaviour does not know about added batch field GS_
"Therefore we need to create a mechanism to make sure it works as p
"Existing enter behaviour and verification
CONSTANTS: mem_9212(25) TYPE c VALUE 'GS_9212'.
FIELD-SYMBOLS: <scr9212> TYPE zwm_s_scr_9212.
ASSIGN (mem_9212) TO <scr9212>.

CONSTANTS: mem_R9212(25) TYPE c VALUE '(SAPLLMOB)GS_9212'.
FIELD-SYMBOLS: <gs_R9212> TYPE zwm_s_scr_9212.
ASSIGN (mem_R9212) TO <gs_R9212>.

IF <scr9212> IS ASSIGNED.

    IF <scr9212>-tapos IS INITIAL.
        <scr9212>-tapos = ltap-tapos.
    ELSE.
        "If screen is moved to next item
        IF <scr9212>-tapos NE ltap-tapos.

```

```
CLEAR <scr9212>.  
<scr9212>-tapos = ltap-tapos.  
IF <gs_R9212> IS ASSIGNED.  
    CLEAR <gs_R9212>.  
ENDIF.  
ENDIF.  
  
LOOP AT SCREEN.  
  
IF screen-name EQ 'GS_9212-CCHARG'.  
    IF ltap-charg IS INITIAL.  
        screen-invisible = '1'.  
        Screen-active = 0.  
  
        IF <scr9212> IS ASSIGNED.  
            CLEAR <scr9212>-mustverify.  
        ENDIF.  
    ELSE.  
  
        IF <scr9212> IS ASSIGNED.  
            <scr9212>-mustverify = abap_true.  
        ENDIF.  
  
        screen-invisible = '0'.  
        Screen-active = 1.  
  
        IF <scr9212> IS ASSIGNED AND ltap-charg EQ <scr9212>-ccharg  
            screen-input = 0.  
        ELSE.  
            screen-input = 1.  
        ENDIF.  
  
    ENDIF.  
    MODIFY SCREEN.  
  
ENDIF.  
ENDLOOP.  
  
"This data is used in FIND_NEXT_KEY function  
"Which is used in enter behaviour  
IF <scr9212> IS ASSIGNED.  
    IF <gs_R9212> IS ASSIGNED.
```

```

<gs_R9212>-ccharg = <scr9212>-ccharg.
<gs_R9212>-tapos = <scr9212>-tapos.
<gs_R9212>-num_of_alq = <scr9212>-num_of_alq.
<gs_R9212>-mustverify = <scr9212>-mustverify.
<scr9212>-canverify = <gs_R9212>-canverify.

ENDIF.
ENDIF.
ENDIF.

ENDMODULE.

*&-----
*& Module SPECIAL_FIELD_OUTPUT OUTPUT
*&-----
*&
*&-----
MODULE special_field_output OUTPUT.
ENDMODULE.

*&-----
*& Module SET_VALUES OUTPUT
*&-----
*&
*&-----
MODULE set_values OUTPUT.
ENDMODULE.

*&-----
*& Module SET_CURSOR OUTPUT
*&-----
*&
*&-----
MODULE set_cursor OUTPUT.
"Required to set cursor order
PERFORM set_cursor_pos(sapllmob)
    USING line_no_step_loop CHANGING screen_fcode current_field.
PERFORM set_scroll(sapllmob) USING tap_index tap_init_size tap_total
    CHANGING temporary_index.

* Not for HUM
PERFORM set_verify_fields_single(sapllmob).
IF current_field IS INITIAL.
LOOP AT SCREEN.
    IF screen-invisible = option_off
        AND screen-input = option_on
        AND screen-group1 <> 1.
        SET CURSOR FIELD screen-name.
    EXIT.

```

```

ENDIF.
ENDLOOP.
ENDIF.

ENDMODULE.

*&-----
*&     Module EXIT_COMMANDS INPUT
*&-----
*     text
*-----

MODULE exit_commands INPUT.

    PERFORM exit_commands_form(sapllmob)
        CHANGING ok_code screen_fcode prev_screen int_table_nam

ENDMODULE.

*&-----
*&     Module MODIFY_TAP INPUT
*&-----
*     text
*-----


MODULE modify_tap INPUT.
    "Required to pass enhanced screen data to main program
    CONSTANTS: lv_memory(25) TYPE c VALUE '(sapllmob)rlmob'.
    FIELD-SYMBOLS: <rlmob> TYPE any.
    ASSIGN (lv_memory) TO <rlmob>.
    IF <rlmob> IS ASSIGNED.
        <rlmob> = rlmob.
    ENDIF.

ENDMODULE.

*&-----
*&     Module USER_COMMANDS INPUT
*&-----
*     text
*-----


MODULE user_commands INPUT.
ENDMODULE.

```

I have placed a piece data block in SAPLLMOB. That is because, we will need access

screens GS\_9212 data from other parts of call stack and SAPLLMOB sits on top of call stack. Go to include **LLMOBTOP** and add an enhancement at the end of include.

Code in **LLMOBTOP**:

```
*$*$-Start: (1)-----
ENHANCEMENT 2 ZLLMOBF01.      "active version
"For Enhacement screen used in LM06
data: GS_9212 TYPE zwm_s_scr_9212.
ENDENHANCEMENT.
```

And below code includes of enhancement MWMRF212.

EXIT\_SAPLLMOB\_170 -> EXIT\_SAPLLMOB\_170 -> we are passing values to sub screen.

```
*&-----
*& Include          ZXLRFU12
*&-----

"Screen exit for 9212 CMOD:ZWM -> Enhancement :MWMRF212 for RF Menu L
ltap           = i_ltap.
ltak           = i_ltak.
rlmob          = i_rlmob.
rl02b          = i_rl02b.
tap_init_size  = i_tap_init_size.
tap_total_lines = i_tap_total_lines.
tap_index       = i_tap_index.
temporary_index = i_temporary_index.
line_no_step_loop = i_line_no_step_loop.
screen_fcode    = i_screen_fcode.
current_field   = i_current_field.
```

EXIT\_SAPLLMOB\_480 -> INCLUDE ZXLRFU43 -> We are checking if Batch is verified. If not verified we will add an error line to make sure user gets a verification warning.

```
*&-----  
*& Include          ZXLRFU43  
*&-----  
"Screen exit for 9212 CMOD:ZWM -> Enhancement :MWMRF212 for RF Menu L  
"Verify batch  
REFRESH o_verification_errors[].  
IF gs_9212-canverify IS NOT INITIAL AND ltap-charg IS NOT INITIAL  
  AND ( gs_9212-ccharg IS INITIAL OR  gs_9212-ccharg NE ltap-charg ).  
  
  CLEAR gs_9212-ccharg.  
  
  DATA(error) = VALUE sprot_u( var1 = 'Batch' ) .  
  APPEND error TO o_verification_errors.  
ENDIF.
```

Enhancement code in function FIND\_NEXT\_KEY, add on top of existing code. We will prevent passing to next screen if batch is not verified!

```
FUNCTION FIND_NEXT_KEY.  
*****  
*$*-$-Start: (1)-----  
ENHANCEMENT 1 ZWM_ENTER_KEY_ROUTES.      "active version  
"LM06 Screen has batch field and that field needs to be filled if TO  
"This code is added to integrate custom batch field to enter navigati  
    CONSTANTS: mem_R9212(25) TYPE c VALUE '(SAPLLMOB)GS_9212'.  
    FIELD-SYMBOLS: <gs_R9212> TYPE zwm_s_scr_9212.  
    ASSIGN (mem_R9212) TO <gs_R9212>.  
    IF <gs_R9212> IS ASSIGNED.  
  
        IF I_LAST_VERIF is NOT INITIAL or I_LAST_ITEM is NOT INITIAL.  
            <gs_R9212>-canverify = abap_true.  
        else.  
            <gs_R9212>-canverify = abap_false.  
        ENDIF.  
  
        IF <gs_R9212>-mustverify is NOT INITIAL and <gs_R9212>-ccharg i  
            clear : I_LAST_VERIF ,I_LAST_ITEM.  
        ENDIF.  
    ENDIF.  
  
ENDENHANCEMENT.
```

That is all you need to do to add a new field and integrate it with WM verification and enter behavior.

**Add new screen with a variant and change your LRFMD settings.**

**Logistics Execution**

- Goods Receipt Automotive
- Decentralized WMS Integration
- Extended Warehouse Management Integration
- Warehouse Management
- Shipping
- JIT Outbound
- JIT Inbound
- Just-in-Time Processing (Next Generation)
- Transportation
- Mobile Data Entry**
  - Verification Control
  - Bar Code
  - Define Menu Management
  - Default Enter Function (Navigation With Bar Code Scanner)
  - Define Screen Management
  - RF Queue Management
  - System Modifications
- Archiving and Data Aging
- Authorization Management

Set screen with variant.

<b>Display View "Screen Management": Overview of Selected Set</b>					
Screen Management					
Mod. pool	ScrnFormat	Variant	Logi...	LogicalScr	Act.s...
SAPLLMOB	Narrow format	2	0212	Source info material	9212
SAPLLMOB	ITS format	2	0212	Source info material	9212
SAPLLMOB	Large format	2	0212	Source info material	9212

Change LRFMD Screen variant.

Change View "Assignment User ->Queue": Overview of Selected Set							
New Entries							
Assignment User ->Queue							
W...	User	Queue	Status	Screen format	Variant	Main menu	Do
TST	MEYRALIB		<input checked="" type="checkbox"/>	16X20	2	MAIN	

## Lets run LM06

I will fill first 2 verification fields and press enter without filling batch.

**Select Delivery**

F2 Clr

F3 Back F4 Nxt

Delivery

0080000051

**Source Information - Multiple**

F1 Save F2 Clr

F3 Back F4 Nxt

Source information

Source Bin: SL1 01-01-02 ... L

Material information

Material: 50

TL\_WHM - FERT

Batch: 2000000152

No.Aliquots: N/A

S S

F5 Det F6 Diff

Enter

**Message**

Verification error in fields Batch

OK

That is it. I hope that post will help somebody who is also looking for that information.

Feel free to add your own solutions and suggestions to comments.

Thanks for reading.

## Comments



DominikTylczyn Active Contributor

2022 Aug 30

3:31 PM

Nice one!!!



beyhan\_meyrali Active Contributor

2022 Aug 31

7:09 AM

Thanks Dominik.

A comment like that from such an expert as yourself is much appreciated!

Regards



former\_member538062 Explorer

2023 Mar 14

6:42 AM

Dear beyhan.meyrali

This is very useful document for activating batch verification, I'm surprised that SAP has not given this basic functionality with standard settings. Anyhow your article is very useful to achieve business requirement.

Regards,

Nayeem.



beyhan\_meyrali Active Contributor

2023 Mar 15  
7:02 AM

Hi Nayeem,

Happy to see it is useful for you.

Regards